

**MARKETING DEPARTMENT
The Wharton School
THE UNIVERSITY OF PENNSYLVANIA**

**MKTG 771/271-401
MODELS AND TOOLS FOR MARKETING TACTICS
AND STRATEGY**

Course Syllabus and Schedule—8/17/2015

Professor Jehoshua (Josh) Eliashberg
STE 700 JMHH
Telephone: 215-898-5246
E-mail: eliashberg@wharton.upenn.edu
Office Hours: Wednesdays, 5-6pm and by appointment
Grader: Yupeng Chen: yupengc@wharton.upenn.edu
Office Hours: Thursday 5-6pm
Administrative Assistant: Kate Molt katemolt@wharton.upenn.edu
Course Website: <https://wharton.instructure.com/login>
Required Reading Pack: Available via Study.net

Fall 2015

PERSPECTIVE

In today's business environment, marketing executives are involved in complex decision-making and they become responsible for return on their marketing investments. The first objective of this course is to help participants become better executives. By exposing students to various analytical and computer-based tools, developed for solving marketing problems, it will help to prepare them for careers in industries such as consumer packaged goods, hi-tech, financial services, media and entertainment, pharmaceutical, consulting, and venture capital. The course's main focus is on various existing models, such as models that predict the consumer's dynamic adoption of an innovative product. However, at some point in their career, students may find themselves facing business problems for which a model can assist in making decisions, but no existing model is available. Hence, the second objective of the course is to provide participants with critical skills necessary to evaluate new models to which they may be exposed by attending presentations or reading the literature. The models to be discussed in the class have been implemented and proven useful in a wide range of industries (e.g., business-to-consumers and business-to-business).

The course is not only about models, however. It also covers modeling needs. Some industries such as the media and entertainment or the pharmaceutical industries present unique problems and modeling needs. The third objective of the course is to expose participants to the nature and essence of such idiosyncratic problems as well as modeling needs in such industries. Overall, the course will make participants understand better critical marketing problems by analyzing them rigorously and will enhance their skills in either designing or evaluating models-based strategies.

COURSE OBJECTIVES

1. To help course participants become better managers/consultants by gaining understanding into tools available for analyzing marketing decision problems.
2. To acquaint participants with and help them to understand analytical and computer-based models and techniques which have been used to aid marketing decisions.
3. To give participants critical skills for evaluating new marketing models and quantitative tools about which they may read in the literature, and to enable them to read the literature.
4. To help participants understand marketing problems more clearly through useful frameworks and by analyzing them quantitatively.
5. To produce managers who will not be taken advantage of by some quantitative consultants

DESIRED COURSE PREREQUISITES

The course will be of particular relevance to students planning careers in marketing and management consulting. The course has been designed for students with some background in quantitative methods as well as some exposure to basic marketing concepts. That is, students who have taken the marketing management course or have an equivalent experience.

COURSE MATERIALS AND APPROACH

In the course we will use a variety of readings, cases, and applications. The most important readings and complete list of cases are contained in the Study.net. In addition, lecture notes will be made available on the **Course Canvas** throughout the semester. The readings are designed to introduce key concepts and principles. Cases will allow examining, in detail, the applications of particular data sources and analytical approaches and techniques. The course emphasizes applications and marketing decision making. To gain a practical experience, you will work on a group project involving data collection, analyses, and telling your story, whose progress will be monitored throughout of the semester. Statistical analyses in lecture will be demonstrated using the JMP statistical software.

There will also be a number of guest lecturers who will share perspectives into the practice of data-based decision making. **Please note that there may be some changes in the dates the guests are scheduled to visit the class. For updating, please check the course syllabus' date on the course Canvas.**

ASSIGNED READINGS

Recommended Text: *Principles of Marketing Engineering (2nd Edition)* by Lilien, Rangaswamy, and De Bruyn (LRD), Revised Second Edition, 2013. Available at the library on reserve. Can be purchased at the bookstore and Amazon.

Another text on reserve: *Marketing Models*, by Lilien, Kotler, and Moorthy (LKM), Prentice-Hall, 1992 (book is available on reserve at Lippincott Library). It is an old but classic text and it provides more technical details on some of the models discussed in class.

Course Bulk Pack is available in Study.net

COURSE GRADING

Your final grade in the course will be based on the following criteria and weights:

Group project	45%
Project presentation	5%
Individual assignments (to be described)	30%
Class participation/attendance	20%

ASSIGNMENTS AND GROUP PROJECTS

The course will involve two types of assignments: individual take-home assignments and a major group project. The take-home assignments will be put in Canvas and they are designed to provide running examples of the various concepts and methods introduced in the course and, secondarily, a means for assessing student progress. ***Late homework assignments will not be accepted.***

The major group project is the primary evaluation tool in the class. Its structure is straightforward: the class will be divided up into teams of **four to six (4-6)** members each.

The group project will give you an opportunity to design and conduct a full-fledged market analysis project. Many, if not all, recent projects involved **startups** ideas. I prefer to stay in this space. It is in line with Penn students interests and careers objectives and it facilitates comparisons across groups. Since the research project will involve, however, a considerable amount of time and effort, it is vitally important that you work on a project that you find exciting and I will be receptive to special requests. It is strongly recommended that you start thinking about a marketing problem at the very beginning of the course. Feel free to discuss with me any ideas that you may have.

The group should clearly identify the marketing problem it is working on and translate this problem into a set of sharply posed and answerable research questions and design. The projects progress will be reviewed throughout the semester.

Presenting research results convincingly to an audience is, in my opinion, a critical task. We will spend some time on it in the class. The last two sessions will give you such an opportunity (Approximately 20 minutes per presentation). Each group will be asked to make an in-class **final project presentation** in these sessions. The other members of the class are expected to participate and act as the client. **Remember the “10/20/30 rule of PowerPoint”—10 slides, 20 minutes and no font smaller than 30 point.** I will let you know the sequence of the presentations prior to December. The final written report should be no longer than **twenty** double-spaced pages in total (excluding exhibits, appendices, and other attachments). **The presentation deck and final report is due on the last class meeting.**

At the end of the course syllabus you will find a Group Project Self-Evaluation Form which will give you an opportunity to share with me your evaluation of the relative contributions made by your groupmates.

CLASS ATTENDANCE

I expect you to be on time to class. Every session of the course will involve some discussion. Please be prepared. Some class sessions in this course follow a case discussion format. The assigned cases are intended to give you practice to support a decision. Further, the case method provides a vehicle by which to apply the theories, concepts, and analytical techniques discussed in a class or in the reading materials. You will also find them helpful in working on your group project. Keep in mind that your grade for class participation is not simply a function of the amount of "air time" you take up. I will evaluate you on how well you respond to questions and on how effectively you take into account the comments and analyses of your classmates. In order to obtain a grade for class participation you must attend the class sessions and contribute meaningfully. **Presentation decks will be available before class and the use of laptops in the classroom is discouraged.**

The various **guest lectures** are intended to provide the class with an opportunity to get exposure to real-world problems and their research-based solutions. It is highly recommended that you familiarize yourself with the guest speaker's firm and its clientele. **It is expected that you email me at the end of the guest speaker's day your three key takeaways from the session.** Please note that there may be some *changes* in the dates they are scheduled to visit the class.

ACDEMIC INTEGRITY

Please familiarize yourselves with the University Code of Academic Integrity:
http://www.upenn.edu/academicintegrity/ai_codeofacademicintegrity.html

Marketing 771/271-401
Fall 2015
J. Eliashberg
Tentative Course Schedule

Date	Session	Topic, Readings, Cases, Assignments	LRD
W. August 26	1	Introduction <ul style="list-style-type: none"> • Objective of this course • What you will learn in this course • Course administrative issues • Getting to know each other 	
M. August 31	2	Marketing Problems and Marketing Models Readings: <ul style="list-style-type: none"> • “Principles of Marketing Engineering” • “Implementing and Evaluating SILVERSCREENER”(just skim it) 	Ch.1
W. Sept 2	3	More on Marketing Problems, Modeling Needs, and Models: The Case of Product /Service Positioning	Ch.4, pp. 100-102
W. Sept 9	4	Perceptual Maps and Factor Analysis: The Fundamental Ideas Reading: <ul style="list-style-type: none"> • “Analyzing Consumer Perceptions” 	Ch.4, pp. 113-118
W. Sept 16	5	Factor Analysis: Interpreting the Output Readings: <ul style="list-style-type: none"> • “Motion Picture Attendance” • “Movie Genres: Toward a Conceptualized Model” Critical issues in Survey Design Due Hard Copies in Class: List of Groups Members	
M. Sept 21	6	Applications of Qualitative Research	
M. Sept. 28	7	Preference Models Conjoint Analysis: The Basic Idea Readings: <ul style="list-style-type: none"> • “Conjoint Analysis: A Manager Guide” 	Ch. 6, pp. 162-174
W. Sept 30	8	New Data Collection Methods: Neurophysiology and Biometrics	
M. Oct 5	9	Conjoint Analysis: Interpreting the Output Probability Models Market Share Models Readings: “The consumer rent vs buy decision in the rentailer” Due Hard Copies in Class: One page group problem definition	Ch. 4, pp. 112-113
W. Oct. 7	10	Reporting Research Results: Telling the Story	

Date	Session	Topic, Readings, Cases, Assignments	LRD
M. Oct. 12	11	Market Analysis for New Product/Business Opportunities Case: E.T.Phone Home Discussion Issues: Digitron’s Survey Methodology and Forecasting Model Due Hard Copies in Class: Assignment #1	
W. Oct. 14	12	Market Potential, Penetration, Share Forecasting Models: An Overview	
M. Oct. 19	13	Application of quantitative and qualitative methodologies	
W. Oct. 21	14	Market Penetration Models: The Bass Model <ul style="list-style-type: none"> • Formulation • Use • Estimation Readings: “Four Products: Predicting Diffusion” “Forecasting the Adoption of New Product” “A New Product Growth Model” “Diffusion Models: Managerial Applications and Software”	Ch. 5, pp. 136-143
M. Oct. 26	15	More on the Bass Model and other dynamic models Reading: “A Parsimonious Model for Forecasting Gross Box-Office Revenues of Motion Pictures” “A Forecasting System for Movie Attendance”	
W. Oct. 28	16	Overview: New Products-Related Problems and Models Case: “Johnson Wax: Enhance (A) Case”	
M. Nov 2	17	The Assessor Model Qualitative Models: Decision Support Systems/ Expert Systems <ul style="list-style-type: none"> • Readings: “A Knowledge-Based System for advertising Design” • “Developing Marketing Expert Systems” • “Hard Up for a Plot?” 	Ch. 7, pp. 144-151 Ch. 6 pp. 158-161
W. Nov 4	18	Projects Progress Review	
M. Nov 9	19	Applications in the entertainment industry Due Hard Copies in Class: Assignment #2	
W. Nov. 11	20	User Generated Content and Text Analytics Reading: Assessing Box Office Performance Using Movie Scripts: A Kernel-based Approach Practical Text Analytics Chapters 1,2	

Date	Session	Topic, Readings, Cases, Assignments	LRD
M. Nov. 16	21	Applications of Text Analytics	
W. Nov. 18	22	Models and Modeling Needs in the Entertainment Industry Readings: MOVIEMOD: An Implementable Decision Support System for Pre-release Market Evaluation of Motion Pictures” “Implementing and Evaluating SilverScreener	
M. Nov. 23	23	Modeling Applications in Consumer Packaged Goods and Hi-Tech Industries Due Hard Copies in Class: Assignment #3	
M. Nov. 30	24	Summary and Preparation for the Projects Presentations	
W. Dec 2	25	Projects Presentations	
M. Dec. 7	26	Projects Presentations. Due on Dec 7 hard copies in class: Groups project written report and presentation deck.	

**University of Pennsylvania
The Wharton School
Mktg 771/271**

Professor Jehoshua (Josh) Eliashberg

Fall 2015

Table of Contents

Articles:

Principles of Marketing Engineering
Implementing and Evaluating Silver Screener: A Marketing Management Support System
Analyzing Consumer Perceptions (HBS# 9-599-110)
Motion Picture Attendance: A Market Segmentation Approach
Movie Genres: Toward a Conceptualized Model and Standardized Definitions
Conjoint Analysis: A Manager Guide (HBS# 590-059)
The Consumer Rent vs Buy Decision in the Rentailer
Forecasting the Adoption of a New Product (HBS# 9-505-062)
A New Product Growth Model for Consumer Durables
Diffusion Models: Managerial Applications and Software
A Parsimonious Model for Forecasting Gross Box Office Revenues of Motion Pictures
A Forecasting System for Movie Attendance
The Value of Marketing Research Information
A Knowledge-Based System for Advertising Design
Developing Marketing Expert Systems: An Application to International Negotiations
Hard Up for a Plot? Get With the Program
Assessing Box Office Performance Using Movie Scripts: A Kernel-based Approach
Practical Text Analytics by Steven Struhl. Chapters 1 and 2
MOVIEMOD: An Implementable Decision Support System for Pre-release Market Evaluation of Motion Pictures

Cases:

- C1. E.T. Phone Home Inc.: Forecasting Business Demand (583-121)
- C2. Four Products: Predicting Diffusion
- C3. Johnson Wax: Enhance (A) (583-046)
- C4. Case 1.2: The Williams Company
- C5. Polyphonics HMI: Mixing Music and Math (9-506-009)
- C6. Cinemex

JEHOSHUA ELIASHBERG

Jehoshua (Josh) Eliashberg is the Sebastian S. Kresge Professor of Marketing and Professor of Operations and Information Management, at the Wharton School of the University of Pennsylvania. He also held visiting scholar positions at the Business Schools of The University of Chicago, Chulalongkorn University (Bangkok, Thailand), Penn State University, INSEAD (Fontainebleau, France), Erasmus University (Rotterdam, The Netherlands), Singapore Management University, Carnegie-Mellon University, The University of British Columbia, UCLA, Time Inc., and at the Operations Research Department at AT&T Bell Laboratories.

Professor Eliashberg's research interests are in developing models and methodologies to solve business problems. His research has focused on various issues including new product development and feasibility analysis, marketing/manufacturing/R&D interface, and competitive strategies. He has particular interest in the media and entertainment, pharmaceutical, and the hi-tech industries. He has authored numerous articles appearing in major academic journals. His work in the entertainment industry has been the subject of articles appearing in BusinessWeek, The Christian Science Monitor, The Financial Post, Financial Times, Forbes, Fortune, Los Angeles Times, The Philadelphia Inquirer, The New York Times, Variety, Newsweek, The Wall Street Journal, and The Washington Post.

He is currently the Series Editor of Springer's International Series in Quantitative Marketing and the Editor-in-Chief of Foundations and Trends in Marketing. He was elected a Fellow of the INFORMS Society for Marketing Science for his contributions to the field in June 2010 and was named a Fellow of The Institute for Operations Research and the Management Sciences in November 2010. His other professional services have included membership on the advisory boards of the National Science Foundation, the American Councils for International Education, and the academic liaison committee of the CMO Council.

Professor Eliashberg has been teaching various courses at Wharton. Prior to joining academia, he was employed for a number of years as an electronic engineer and marketing. He has participated extensively in various executive education programs. His executive education and consulting activities include AccentHealth, AstraZeneca, AT&T, Booz, Allen & Hamilton, Bell Atlantic, Campbell Soup, Cheil Communications, CTV Television Network (Canada), Domino's Pizza, Franklin Mint, General Motors, Givaudan, HBO, IBM, Independence Blue Cross, Inmar, Janssen Pharmaceutica Inc., Johnson & Johnson, L G Electronics, Lucent Technologies, Multimedia Development Corp. (Malaysia), Pathe Cinema (Holland), Philip Morris, The Siam Cement Group (Thailand), Sirius Satellite Radio, Warner Home Video, Weave Innovations Inc., Woodside Travel Trust, and Wyeth/Pfizer Pharmaceuticals. He also serves as an advisor to a number of startup companies.

Group Project Self-Evaluation Form

The purpose of this evaluation form is to communicate the contribution of each individual in the group. Do this by allocating points among group members: give more points to individuals who did more work or for some reason deserve more credit; give fewer points to individuals who did less work or for some reason deserve less credit. The total points available for the entire group **including you** are 100. Therefore, if there are five members in your group, and if you feel that each member did their fair share of the work, then give 20 points to each member. If you give one or more members more than 20 points, then one or more other members must receive less than 20 points. I will consider confidentially all of the evaluations turned in by the group and any other relevant information that emerges during the term in assigning points for the Individual Effort component of the project. (Of course, you may as a group decide jointly how you will make the point allocations, if you so desire.)

Project Title:

	Group Member	Points
Your Name:	_____	_____
Other Members:	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
Comments (if any):	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____